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THE YELLOW-BILLED MAGPIE.

BY BARTON W. EVERMANN.

DURING two years spent in Ventura county, Southern California, I became quite familiar with this handsome yet noisy bird of plebeian tastes. The yellow-billed species seems to be restricted in its range to California, throughout which State it is locally abundant.

One of the great industries of Southern California is wool-growing; the valleys and hillsides are covered with flocks of sheep, from a score to several thousands in number; and nearly every cañon has its corral to which the herder and his faithful dog drive the flocks at eventide. Here they are shut up and guarded through the night. In the morning they are again turned loose to feed upon the burr clover, alfillarilla (or "fillaréé"), and such other stuff as can cause only sheep and mules to thrive. In and about these corrals are various kinds of filth—carcasses of sheep that have died of disease or starvation, bodies of dead lambs and the refuse of the sheep which the herder has slaughtered for his own larder, for jerked mutton and tortillas constitute the chief part of his meager bill-of-fare. Such a place as this is a paragon of restaurants to the magpies. Here they can be found in the early morning, in the evening, and at any other time of day when they happen to be hungry. Here they come to feed upon the filth, keeping up an almost incessant chattering, crying and scolding, which if translated into intelligible English would certainly bristle with oaths and slang. For there, where the English sparrow has not yet found its way, the magpie represents the "hoodlum element" in bird society. But when the English sparrow invades its domain, the magpie will become, by comparison, a most estimable member of the avian fauna of that region.

Almost any cañon which has a considerable sheep corral and is supplied with a few scattered clumps of live oaks, cottonwoods or sycamores, is quite sure to have its colony of magpies. And when you enter one of these cañons you are apt to know of their presence long before you come within gunshot of them, unless they, as is sometimes their custom, remain quiet and hidden until you are near them, when they open fire upon you with volleys of oaths, imprecations and maledictions, which nothing but a charge of shot will stop.

Such a place as this is Wheeler cañon, a few miles down the Santa Clara valley from Santa Paula. By former visits to this cañon I had kept myself informed as to the progress these birds were making in their nesting. So on April 2, 1881, Mr. Fred. Corey and I paid the cañon a visit, believing that many "full sets" would be gotten. We started from home early in the morning and drove down to the cañon, fully prepared to spend the day. As we drove leisurely along the foot of the mountain slope, numerous brown birds (*Pupilo fuscus crissalis*) and valley quails (*Callipepla californica*) scurried from our path and hid themselves in the sage-bush chaparral which there abounds; and an occasional burrowing owl (*Speotyto cunicularia hypogæa*) would salute us with a school-boy bow as we passed. Where the cañon opens into the valley are many large spreading live oaks which, with their dark-green foliage and spreading form, resemble large apple-trees. Many of them have beautifully rounded tops, whose bases are only a few feet from the ground, and whose small dark-green leaves are so thickly set that it is impossible to see among the branches except from below. Farther up the cañon are a number of cottonwoods and a few willows, and still farther more oaks and several sycamores.

He who has collected only here in the East hardly knows how rich may be the results of a day spent in such a cañon as this. Here every tree could be climbed with no great difficulty, and anything it might contain was nearly always obtainable. When we reached the sycamores and cottonwoods the hooded and Bullock's orioles, happiest of all the cañon's happy birds, flitted among the green leaves, delighting the eye with their royal dress, and the ear with their rich melody of song. And a pair of magpies flew up from the edge of a little stream where they had come to make their morning toilet, and perched upon a cottonwood near by. Emphasis was given to their scoldings by excited jerkings of the tail and body after the manner of the jay. But as we had decided to begin collecting at the upper end of the coñon, we passed on without disturbing the nest which we plainly saw in the tree's top. As we neared the upper end of the cañon a California vulture (*Pseudogryphus californianus*) rose from the ground in front of us, where lay a dead pig upon which it was feasting, and soared away to the higher mountains. I know of no bird of more majestic flight than this great vulture of our

Western coast. While rising from the ground his movements are anything but graceful; he starts with a few very awkward steps and still more awkward flaps of his immense wings, but after reaching an elevation of fifty to seventy-five feet, flapping of the wings ceases, and as he circles above you, ascending higher and higher on motionless wings, he proves himself king of the soaring birds. But the magpie was the object of our trip, and to her we must return. Our time was well selected, for the nesting was at its height. The large globular nests were seen in the tops of a number of trees, and most of those that we climbed to contained good sets of eggs. We obtained nine sets altogether. Five nests were found in sycamores and contained three, six, seven, seven and nine eggs respectively. The full nest complement for each of the first two sets had evidently not been reached, as the eggs were perfectly fresh. Incubation had scarcely begun in the two sets of seven each; and the nine eggs of the other set showed but slight embryonic changes.

Two sets of eight eggs each were taken from nests in live oaks, and with these incubation had proceeded several days. One beautiful set of eight eggs was found in a nest in the top of a willow near the lower end of the cañon. In only two or three of the eggs were embryonic changes visible. But one nest was found in a cottonwood, the one we had "spotted" in the morning, and but a short distance from the willow just mentioned. In this nest we found four fresh eggs. Thus from the nine nests we got sixty eggs, which we regarded as a pretty fair day's collecting. From the above facts it seems safe to conclude that the usual nest complement of the yellow-billed magpie is from seven to nine eggs, and that the sycamore is the favorite tree in which to nest in that region.

The nest is a large globular structure very much resembling two crow's nests placed with their faces or edges together, the dome or roof of the nest being somewhat thinner than the lower part. An irregular-shaped entrance-way is left at one side, and the walls of the nest support the dome-shaped roof at a sufficient height to permit the long tail of the sitting bird to extend upward, as the horizontal diameter is not sufficient to permit any other disposition of that member. Except in the lining, very coarse material is used in the construction of the nest—large twigs of cottonwood being most frequently used. The nest is roughly

lined with finer twigs and strips of the inner bark of the cottonwood. A few of the nests we examined were newly made, but the majority were old nests which had been used in previous years. Quite a number of old deserted nests were found, particularly in the live oaks near this mouth of the cañon, where we found no recent nests at all. But a few years before a school-house had been built near this grove of oaks, and the "small boy" proved too much for even the magpies, who retreated up the cañon, leaving their tents behind them.

The eggs of the yellow-bill magpie vary considerably in color as well as in size and general shape. The description of the color given in Baird, Brewer and Ridgway, and copied by Mr. Oliver Davie in his "Egg Check-list of North American Birds," is applicable to nearly all the specimens I have seen, viz., "The ground-color is a light drab, so clearly marked with fine cloudings of an obscure lavender color as nearly to conceal the ground, and to give the egg the appearance of an almost violet-brown." One set of four in my collection has the lavender very pronounced, and in quite large spots or blotches, rather most numerous about the larger end. The eggs of this set measure $1.35 \times .95$, $1.43 \times .90$, $1.29 \times .90$ and $1.33 \times .94$ —the average $1.35 \times .89$, being the largest of any of the sets I have seen. Another set of eight gives $1.18 \times .85$ as the smallest, $1.40 \times .85$ as the largest, and $1.30 \times .85$ as the average. The average of a set of six given by Mr. Davie is $1.30 \times .89$, and on another page he gives $1.20 \times .92$, presumably the average of many sets. B. B. & R. give $1.20 \times .90$ as the measurement of an egg from Monterey, Cal. These last measurements seem rather under the average of those I have seen.

Several of the nests to which we climbed were old deserted ones, and contained no eggs. Mr. Corey, after much difficulty, reached one in which he was surprised to find a set of eggs of the sparrow-hawk (*Tinnunculus sparverius*).

While we had been quite successful in securing many good sets of beautiful eggs, these material things alone did not represent the profits which the day had brought to us. During our morning ride, besides the objects already mentioned, we had seen, enjoyed and conversed about a score of other things no less attractive. And now in the evening, as the sun sank beyond the hills, and the highest peaks of the cañon's walls received its last warm

glows ere it passed beyond the Pacific, new charms were added to the place. We saw the beautiful crested valley quails fly on whirring wing from the mesas and the chaparral to the dense foliage of the live oak, where their leader called to the night's repose; we heard the long-continued ringing note of the ground tit (*Chamæa fasciata*) from the thicket by the road-side; we heard—almost *felt*—the dismal, multitudinous barkings and howlings of a coyote that watched us from a ridge not far away, and could hardly believe one poor beast could carry on such a concert; we saw and heard and felt a hundred beauties which delight the soul and fill it with happy memories. We enjoyed most the fish we didn't catch.

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THE PHYLOGENY OF THE CAMELIDÆ.

BY E. D. COPE.

AS is well known, the camels form a well-distinguished division of the Artiodactyla, or even-toed ungulates. The prominent features which separate them, osteologically speaking, from other Artiodactyla are three, viz., the absence of a canal of the cervical vertebræ which in other Mammalia encloses the vertebral artery (Fig. 1); the presence of an incisor tooth on each side of the

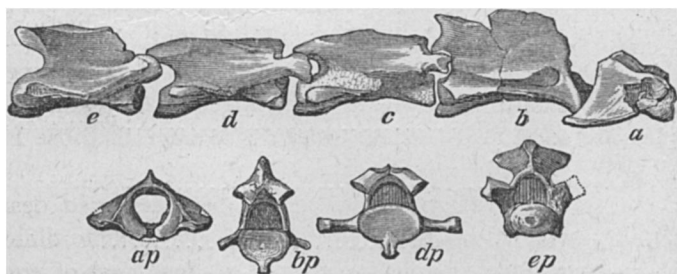


FIG. 1.—*Poebrotherium labiatum* Cope; five anterior cervical vertebræ, showing absence of vertebral arterial canal; one-half natural size. Figs. *p*, posterior views of vertebræ lettered to correspond with those represented above them. Original, from specimen from White River bed of Colorado, represented in Fig. 7.

upper jaw (Fig. 12); and thirdly, the incompleteness of the keels of the distal ends of the metapodial bones (Fig. 2). This character and that of the presence of incisors, are primitive conditions common to all the early Mammalia. The peculiar cervical vertebræ constitute a specialization, but whether degenerative or pro-